

**WHAT IS CLAIMED IS:**

1. A method for erasing a radiation image in a storage phosphor sheet in which a radiation image was recorded and then read by collecting stimulated emission from the phosphor sheet, the method comprising the steps of:

transporting the phosphor sheet along a path in a first direction at a first speed into an erase area having at least one erasing light source, the phosphor sheet having a leading edge and a trailing edge;

exposing a portion of the phosphor sheet disposed within the erase area to the light source to affect erasure of the radiation image on the exposed portion of the phosphor sheet;

stopping transport of the phosphor sheet when the trailing edge of the phosphor sheet enters the erase area;

causing the phosphor sheet to dwell within the erase area for a predetermined time period;

transporting the phosphor sheet along the path in a second direction opposite the first direction at a second speed different than the first speed; and

transporting the phosphor sheet along the path in the second direction at a third speed different than the second speed when the leading edge exits the erase area.

2. The method of Claim 1, wherein the second or third speeds are determined by determining a level of collected stimulated emission from the phosphor sheet during reading.

3. The method of Claim 1, wherein the second or third speeds are stored in a look-up table.

4. The method of Claim 1, wherein the second or third speeds are stored in a look-up table and correspond with a dimension of the phosphor sheet.

5. The method of Claim 1, wherein the at least one erasing light source is in an ON condition during erasing and in an OFF condition during other times, and the at least one erasing light is cycled to an ON condition for a first time period after having been in an OFF condition for a predetermined time period, the first time period being less than the predetermined time period.

6. An apparatus for removing stored energy from a storage phosphor screen in which a radiation image was recorded and then read by collecting stimulated emission from the phosphor sheet, the phosphor sheet having a leading edge and a trailing edge, comprising:

an erase area having at least one erasing light source;

transport means for transporting the phosphor sheet along a path in a first direction at a first speed into the erase area to expose a portion of the phosphor sheet disposed within the erase area to the light source to affect erasure of the radiation image on the exposed portion of the phosphor sheet;

control means for effecting (i) stopping of the transport of the phosphor sheet when the trailing edge of the phosphor sheet enters the erase area, (ii) dwelling of the phosphor sheet within the erase area for a predetermined time period and (iii) transport of the phosphor sheet along the path in a second direction opposite the first direction after dwelling;

determining means for determining a second speed different than the first speed in which to transport the phosphor sheet along the path in the second direction; and

determining means for determining a third speed different than the second speed in which to transport the phosphor sheet along the path in the second direction when the leading edge exits the erase area.

7. The apparatus of Claim 6, further comprising means for determining a level of collected stimulated emission from the phosphor sheet during reading.

8. The apparatus of Claim 6, further comprising a look-up table for storing the second and third speeds.

9. The apparatus of Claim 6, wherein the determining means is a look-up table.

10. The apparatus of Claim 6, wherein the determining means is a look-up table which corresponds with a dimension of the phosphor sheet.

11. The apparatus of Claim 6, wherein the determining means is a calculation or algorithm.

12. The apparatus of Claim 6, further comprising means for placing the at least one erasing light source in an ON condition during erasing and in an OFF condition during other times, and means for cycling the at least one erasing light to an ON condition for a first time period after having been in an OFF condition for a predetermined time period, the first time period being less than the predetermined time period.